

CLAIMS (30812)

What is claimed is:

1. A method of transmission, comprising:

- (a) providing a set of N symbols where N is an integer greater than 1;
- (b) providing $M-1$ transformations of said set of N symbols where M is an integer greater than 1;
- (b) transmitting said set of N symbols on N subcarriers in a burst from a first antenna; and
- (c) transmitting each of said $M-1$ transformations of set of N symbols on N subcarriers in a burst from a corresponding one of $M-1$ antennas.

2. The method of claim 1, wherein:

- (a) said set of N symbols includes pilot symbols and data symbols.

3. The method of claim 2, wherein:

- (a) M equals 2; and
- (b) said $M-1$ transformations includes a pairwise rotation and complex conjugation of two of said set of N symbols.

4. The method of claim 3, wherein:

- (a) said symbols are QAM symbols.

5. The method of claim 2, wherein:

- (a) N equals 64; and
- (b) 48 of said N symbols are data symbols.

6. The method of claim 4, wherein:

- (a) said set of N symbols is partitioned into $N/2$ pairs of symbols (a_i, b_i) ; and

(b) said M-1 transformation transforms the pairs (a_i, b_i) into the pairs $(-b_i^*, a_i^*)$.

7. A method of transmission, comprising:

(a) providing first and second sets of N symbols where N is an integer greater than 1;

(b) providing M-1 transformations of said first set of N symbols and said second set of N symbols where M is an integer greater than 1;

(b) transmitting said first and second sets of N symbols on N subcarriers in a first and a second burst from a first antenna; and

(c) transmitting each of said M-1 transformations of set of N symbols on N subcarriers in a pair of bursts from a corresponding one of M-1 antennas.

8. The method of claim 7, wherein:

(a) said set of N symbols includes pilot symbols and data symbols.

9. The method of claim 8, wherein:

(a) M equals 2; and

(b) said M-1 transformations includes a pairwise rotation and complex conjugation of two of said set of N symbols.

10. The method of claim 9, wherein:

(a) said symbols are QAM symbols.

11. The method of claim 8, wherein:

(a) N equals 64; and

(b) 48 of said N symbols are data symbols.

12. The method of claim 10, wherein:

(a) said set of N symbols is partitioned into N/2 pairs of symbols (a_i, b_i) ; and

(b) said M-1 transformation transforms the pairs (a_i, b_i) into the pairs $(-b_i^*, a_i^*)$.